Potential participants identified by professionals and carers, and sent patient letter, information sheet and consent form (accessible version)

Baseline appointment with research assistant
Interested participants assessed for eligibility

**Inclusion criteria:**
1) BMI>25kg/m², 2) age>18 years old, 3) mild-moderate LD, 4) ability to consent for themselves, living in the community, 5) presence of carer willing to participate.

**Exclusion criteria:**
1) acute mental illness requiring hospitalisation, 2) severe LD, 3) Prader Willi syndrome, 4) substance misuse, 5) inability to provide informed consent.

Eligible participants (n=60)
Baseline assessments: weight, height, body fat, waist circumference, blood pressure, mental health status, quality of life, self-esteem, attitudes to healthy behaviours, and costs

Randomisation

**Intervention Group**
(n=30)
Shape Up -LD intervention (12 weekly sessions, 90mins sessions)

End of Treatment
12 week outcome assessment

6 month follow up outcome assessment

Qualitative interviews

**Control Group**
(n=30)
Usual care (one off 35mins session)

12 week outcome assessment

6 month follow up outcome assessment

Close of study.
Analysis of data and results fed back to participants.